

WASHINGTON: TUMWATER

Contamination Event Spurs Public Involvement

Background

The City of Tumwater, Washington, draws ground water from three aquifers: the Vashon Advance Outwash, Quarternary Alluvial, and Tertiary-Quaternary Undifferentiated deposits. The Tumwater Water System (TWS) operates 12 wells, five storage tanks, and five pumping stations to supply the water needs of over 30,000 people who live and work there. In February 1993, the city obtained a \$170,500 grant from the State of Washington's Centennial Clean Water Fund to develop a wellhead protection program (WHPP). Tumwater provided dollar-for-dollar matching funds. Later that year, TCE was detected in three production wells; Trichloroethylene (TCE) exceeded the federal Maximum Contaminant Level (MCL) in one well. A subsequent investigation found 19 potential contaminant sources (PCSs) in the vicinity. The discovery of the TCE contamination led to the establishment of a federal Superfund site within an urbanized area of the city. Growing awareness of such pollution has led to a great sense of concern for the public water supply. Citizens have expressed strong interest in source water protection issues, and public meetings on the subject are well attended.

Priority Contamination Threat

The priority contamination threat is from Trichloroethylene (TCE).

Local Involvement and Developing the Protection Plan

Tumwater participated in a Regional Groundwater Policy Advisory Group that consisted of elected officials from three cities and the county, with the goal of creating water protection policies that are consistent across the county. Public involvement in the source water protection effort reflects the interest and concern for drinking water that is shared by many Tumwater residents. Proposed aquifer protection ordinances that were brought to the table by a cooperative three-city utilities staff collective were discussed at council meetings that were open to the public. The TWS received a great deal of feedback on the proposals that helped to create the successful program. Notices and descriptions of the wellhead protection program were published in the city newsletter and each of the city's two Consumer Confidence Reports (mandated by the Federal Safe Drinking Water Act Amendments). The process of developing budgets for source water protection also attracts a great deal of public involvement.

Management Measures

Management measures that have been implemented to control priority sources of potential contamination include overlay zones prohibiting certain land uses, land use controls that are being phased in (described below), public education efforts, and a business pollution prevention program that is accomplished through municipal technical assistance with protection compliance. In addition, the city requires owners of failed septic systems to hook up to city sewers.

As a result of the Regional Groundwater Policy Advisory Group's team-building efforts, each city adopted aquifer protection ordinances. The wellhead protection area for Tumwater and other municipalities extends beyond the municipal boundaries; underscoring the need for all of the cities and the county to adopt similar rules governing aquifer protection. The Policy Advisory Group also offers local businesses technical assistance in compliance with protection objectives.

Tumwater's local ground water protection effort predates the Amendments to the Federal Safe Drinking Water Act (SDWA), which mandated such action; it was started in anticipation of Washington State's passage of similar legislation. Tumwater's aquifer protection law is called the Critical Areas Ordinance, and it has been incorporated into the city's Growth Management Act, which protects the natural resources within city limits. Regulations for new land uses require that there be no adverse impact on ground water quality. Expanding businesses are held to the same high standard. Regulating existing land uses has proven to be trickier, but the city is moving towards implementing stricter ground water regulations for businesses that already exist.

In 2004, Tumwater passed two ordinances further protecting the sensitive aquifers. The first ordinance reduced the amount of time that a property owner has to restart a non-conforming operation from two years to six months within Wellhead Protection Areas (WHPA's). The second ordinance regulates non-conforming land-uses within the 6-month and 1-year WHPA's that have a high probability to contaminate groundwater, such as gas stations and dry cleaners, requiring the owner to relocate their operation outside the WHPA within 10 years.

Since 2000, staff has coordinated with Thurston County's Environmental Health Department to conduct onsite visits to local businesses every other year to assess their use, storage, and disposal of hazardous materials to ensure compliance with local regulations, such as the Nonpoint Source Pollution Ordinance.

Contingency Planning

In the event of an emergency, Tumwater can obtain water for its residents through two connections with the nearby City of Olympia. Tumwater also continues to evaluate new areas for source water development to supplement its wellfields. Unfortunately, Tumwater has had to deal with finding workable contingency plans after serious water shortages were caused by the TCE contamination. If there is a silver lining to this event, it is that Tumwater can rest assured that in the event of another emergency, it will not be without potable water.

Measuring Program Effectiveness

The city and county staff conduct sampling of all municipal public supply wells, as well as private and monitoring wells near potential sources of contamination. This has the dual effect of measuring the effectiveness of management programs and protecting against potential pollution. In addition, staff periodically conduct onsite visits to local businesses to assess how well they maintain storm water infiltration ponds, and conduct other outreach efforts to continuously measure program effectiveness.

For further information, contact:

Dan Smith

Water Resources Program Manager

City of Tumwater

(360) 754-4140

desmith@ci.tumwater.wa.us